

REMARKS

The Official Action has been carefully considered and the Examiner's comments are duly noted. Reconsideration of this application in light of the Amendment for Claim 3 and the arguments submitted is respectfully solicited.

Claims 1 to 3 were rejected under 35 U.S.C 103(a) as being unpatentable over Pfundstein 6,029,067 and Hootari 6,0044,264.

The present invention is directed to a method for storing a private network group information and an extension number concerning a calling subscriber serviced based on a private network group information into a SCP and easily implementing a WVPN in a CDMA mobile communication system using an extension number between subscribers of the WVPN group.

The cited 6, 044,264 reference is directed to art intelligent network service activating method implemented by an intelligent network including a SCP capable of obtaining an intelligent service trigger which defines a triggering operation for activating an intelligent network service and a mobile communication service switching center which is operated as an intelligent network service switching point for activating an *intelligent* net-work service by triggering an intelligent network service trigger in the SCP corresponding to a trigger key generated based on a mobile calling subscriber data.

As described above, the present invention is different from the cited 264 reference in the features that the present invention constructs the WVPN in the CDMA system using the extension number stored in the SCP differently from the cited 264 reference In which the intelligent network service trigger is triggered in the mobile communication service switching center implemented in the SCP for thereby activating the intelligent network service.

The Examiner asserts that the cited 264 reference discloses the SCP for storing the extension number concerning the calling subscriber serviced based on the private network group in 11th column, 16th-21st lines. However, as described therein, the mobile communication service switching center obtains a trigger key of a mobile calling subscriber based on a digit of the subscriber, namely, the directory number analysis in an additional service information of an incoming signal file and switch. Namely, the cited 264 reference does not disclose the feature, of the present Invention in which the extension number concerning the calling subscriber serviced based on the private network group into the SCP. Therefore, there is a big difference between the cited 264 reference and the present invention.

Next, the cited 6,029,067 reference is directed to a wireless mobile network capable of constructing a virtual private network for a mobile subscriber by implementing a second logic data set for recording as a subscriber of a virtual private network with respect to a mobile subscriber additionally to a first subscriber data set for recording a mobile subscriber as a mobile wireless

network by a database of HLR.

However, there is a difference in that the present invention is directed to constructing a WVPN in a CDMA system using an extension number stored in the SCP, and the cited 067 reference is directed to additionally providing a second logic data set for implementing an access with respect to a virtual private network to a subscriber data set of HLR including a first subscriber data set for an access of a mobile wireless network.

Namely, the present invention constructs the WVPN for a communication between the calling subscribers registered in the private network group based on the extension number stored in the SCP using the SCP, and the cited 067 reference constructs the mobile wireless network based on a virtual private network for a mobile subscriber using HLR without using the intelligent structure based on an additional hardware.

The difference between the present invention and the cited 067 reference will be described in detail for overcoming the Examiners rejections to Claims 1-3.

In the cited 067 reference, as described in 4th column, 62nd - 67th lines, in the case that a recording command, branch extending number VNPX with respect to a service code VN-OPT are inputted, a necessary data for checking an access approval is received by the HLR and is compared with the information stored in the HLR based on a branch extending number VNPX and an ID

number IMSI of a mobile subscriber. In the present invention, a private network group and extension number are registered in the SCP of the present invention. When a certain calling subscriber calls a certain incoming subscriber of the same group, it is judged whether the call by the calling subscriber is coincided with the extension number or the MDN (mobile phone directory number).

Namely, in the cited 067 reference, the branch extending number VNPX and the information stored in the HLR are compared. In the present invention, the private network group and the extension number are registered in the SCP, and the extension number, which is different from the common MDN, is judged.

As described in 62nd line, 4th column and 4th line, 5th column of the cited. 067 reference, in the case that the recording common and branch extending number VNPX with respect to the service code VN-OPT are inputted, the HLR receives a necessary data for checking the access, and the branch extending number VNPX and the information stored in the HLR based on the ID number, IMSI if the mobile subscriber are compared, so that it is possible to check a certain virtual private network to which the mobile subscriber access. In the cited 067 reference, only subscriber MS3 accesses the private network. In the present invention, in the case that the call by the calling subscriber is coincided with the MDN, the mobile communication network which uses the MDN is constructed, and in the case that the call by the calling subscriber is coincided with the extension number, the WVPN is constructed. Therefore, there is a big difference between the cited 067 reference and the present invention.

Namely, in the cited 067 reference, the branch extending number VNPX and the information stored in the HLR are compared. It is checked whether a mobile subscriber accesses a certain virtual private network based on a call number directory allocated to each private network corresponding to a virtual private switch, namely, a branch extending number VNPX. However, in the present invention, the mobile communication network which uses MDN is constructed based on the number of call by the calling subscriber, and the WVPN is constructed.

Therefore, the inventive features of the present invention are not easily implemented based on the cited 264 reference in which the intelligent network service is activated using the intelligent network service trigger in view of the cited 067 reference in which the mobile wireless network is constructed as a virtual private network using HLR.

As described in 30th - 40th lines, 5th column of the cited 067 reference, if the data field DIF does not include an input based on the mobile subscriber MS3, the VLR accesses the call number directory of the virtual private network, and, in the same manner, the number inputted based on the mobile subscriber M93 is logged as an extending number or the simplified address dialing number, and is converted into a subscriber number UPDN complying with a mobile wireless protocol MAP. The subscriber number includes a branch extending number VNPX and an extension number EXT* of the mobile number MS* and is transmitted to the HLR through the MAP protocol based on VLR. Here, since the ID number IMSI* of the mobile subscriber MS* is provided based on a reference list,

the call pages the ID number. However, in the present invention, a telephone number of the calling subscriber is requested to the HLR according to the present invention, and the telephone number and extension number are transmitted to the SCP concerning the calling subscriber. A MDN information of the incoming subscriber is requested, and then it is Judged whether there is a telephone number group of the calling subscriber.

In the cited 067 reference, the operations for converting the number inputted by the mobile subscriber MS3 into a subscriber number UPDN complying with a mobile wireless protocol. MAP based on the call number directory and for connecting a call by paging the ID number IMSI* of the mobile subscriber MS* based on the reference list of the subscriber number are implemented. However, in the present invention, the operations for requesting a MDN information of the incoming subscriber by transferring the telephone number and incoming extension number of the calling subscriber to the SCP and for Judging whether there is a private network group including the telephone number of the calling subscriber.

As described in 43th-48th lines of 5th column of the cited 067 reference, the incoming call of the mobile subscriber MS3 from the mobile wireless network MRN or the public telephone network PSTN evaluates the subscriber data set to which one logic data set is allocated. At this time, the service inputted into the subscriber data set LDS is activated, and the call is switched to one of the identified subscriber stations in the CFO data field. However, in the present invention, in the case that there is a telephone number group of the calling subscriber, it is judged whether the extension

number transferred to the SCP is included in the group of the calling subscriber. Therefore, there is a big difference between the cited 067 reference and the present invention.

The cited 067 reference is basically directed to implementing an operation for evaluating a subscriber data set and implementing an operation for activating a service inputted into the subscriber data set LDS and an operation for switching a call to one of the identified subscriber stations in the CFU data field. However, in the present invention, in the case that it is checked that the calling subscriber is the subscriber registered in the private network group, it is checked whether the incoming number is an extension number of the subscriber registered in the private network group.

As described in 13th-21st lines of 5th column of the cited 067 reference, in the case that the mobile subscriber MS3 is recorded as a subscriber of the virtual network VN, in the private network, the mobile subscriber MS3 dials the extension number for thereby quickly and easily calling the subscribers MS1 and MS2, and the extension number EXT is dialed, thereby for thereby connecting with the private network. The use with respect to the call in a certain network which does not exceed the region A1 is charged based on a monthly basic charge, and another call is implemented based on a certain rate based on the public mobile wireless communication network. Therefore, the above-described operation of the cited 067 reference is different from the operation described in the third sub-step of the present invention in which in the case that there is an extension number in the group of the calling subscriber, the MDN corresponding to the incoming extension number is

transmitted to the MCC for thereby forming WVPN.

Namely, the cited 067 reference is directed to implementing an operation for dialing the extension number of the mobile subscriber MS3 for calling and a charging operation. However, in the present invention, in the case that the incoming extension number is checked as an extension number of the subscriber registered in the private network group, namely, the calling subscriber, the MDN corresponding to the incoming extension number is transferred to MCC for thereby forming WVPN.

As described in 9th-12th of 5th column of the cited 067 reference, if there is not a branch extension number VNPX in the HLR with respect to the mobile subscriber MS3, a virtual private network is not selected. The mobile subscriber MS3 is recorded in the mobile wireless network MRN. In the present invention, in the case that there is not a telephone number group of the calling subscriber, and in the case that there is not an extension number in the group of the calling subscriber, an incoming connection impossible guide broadcast is outputted to the calling subscriber.

In addition, the cited 6,101,382 and 5,949,770 do not disclose the inventive features of the present invention.

Accordingly, there are *big* differences between the cited 264, 067, 382, and 770 references and the present invention their constructions and operations.

Accordingly, the only claim that has been amended is Claim 3 and this has been submitted in the Appendix indicating the underlining and brackets.

If there are any points outstanding the Examiner is respectfully asked to call applicant's attorney in order to do what is necessary to place the application into condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "J. Harold Nissen", with a stylized, flowing script.

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